Takeshi Saito et al. GREER, BURNS & CRAIN, (Patrick G. Burns) Ref. No. 0828.69843 (312) 360-0080 Sheet 1 of 27 CONTENT STORAGE UNIT **2**b **NETWORK** HIGH MEDIUM QUALITY LOW QUALITY **QUALITY-MANAGEMENT** INFORMATION **S**6 **S**2 CONTENT SERVER DETERMINE QUALITY OF CONTENT BANDWIDTH 1 Mbps> & ≧100 Kbps in 100 Kbps> ≧1 Mbps GENERATE TRANSMIT CONTENT NETWORK INTERFACE 2a NET-WORK 9 NETWORK INTERFACE#2 NETWORK INTERFACE#3 NETWORK INTERFACE#1 TERMINAL 1a <u>1</u>p AVAIL-UNAVAIL-ABLE 17 AVAILA ABLE INTERFACE INFORMATION TABLE 9.6 kbps **S**4 BAND-WIDTH 64Kbps 11Mbps AVAILABLE INTERFACES INTERFACE TO BE USED NOTIFICA-TION OF BANDWIDTH COMMUNI-CATION DETERMINE S1 DETECT DATA NETWORK INTERFACE **S**2 #1 #2 #3

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FIG. 1

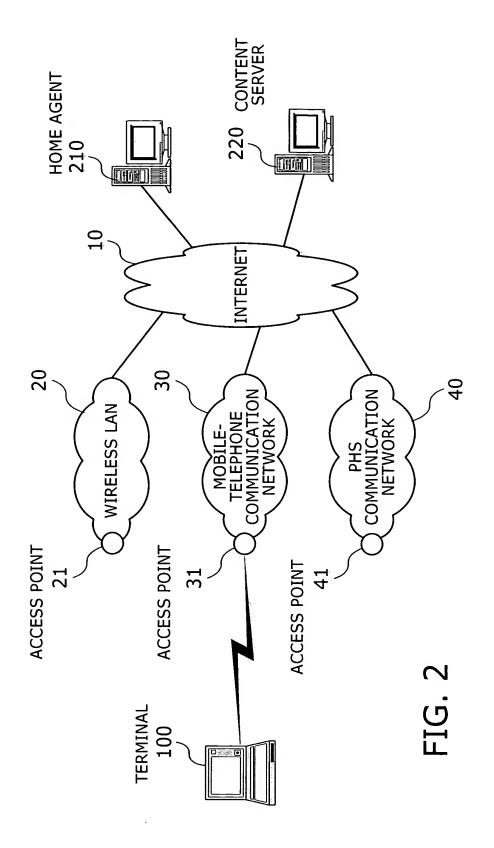
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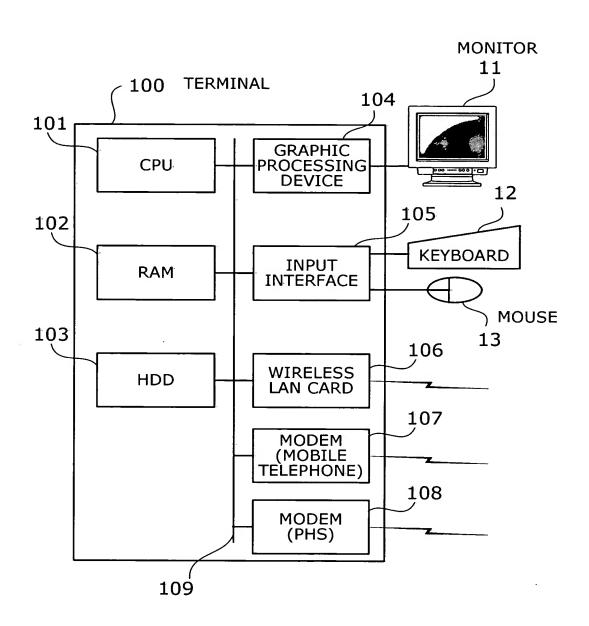


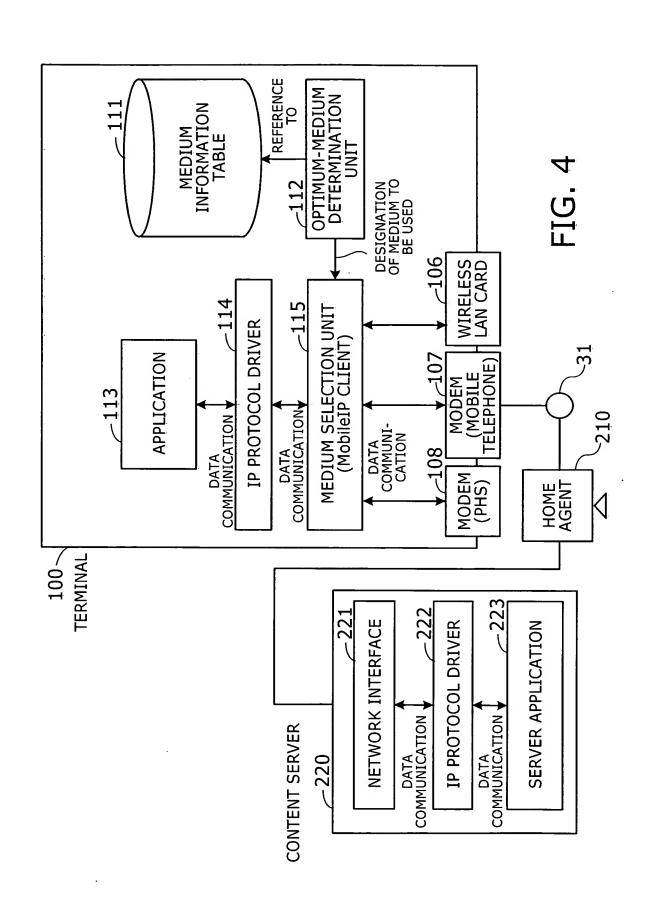
FIG. 3

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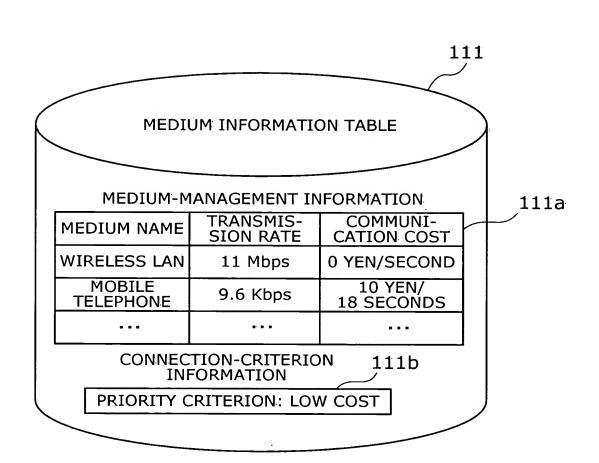
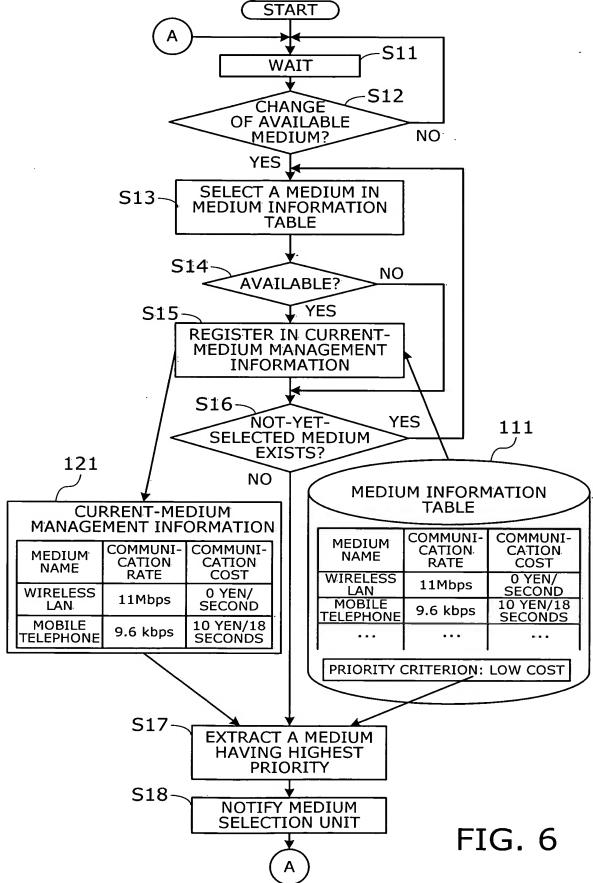
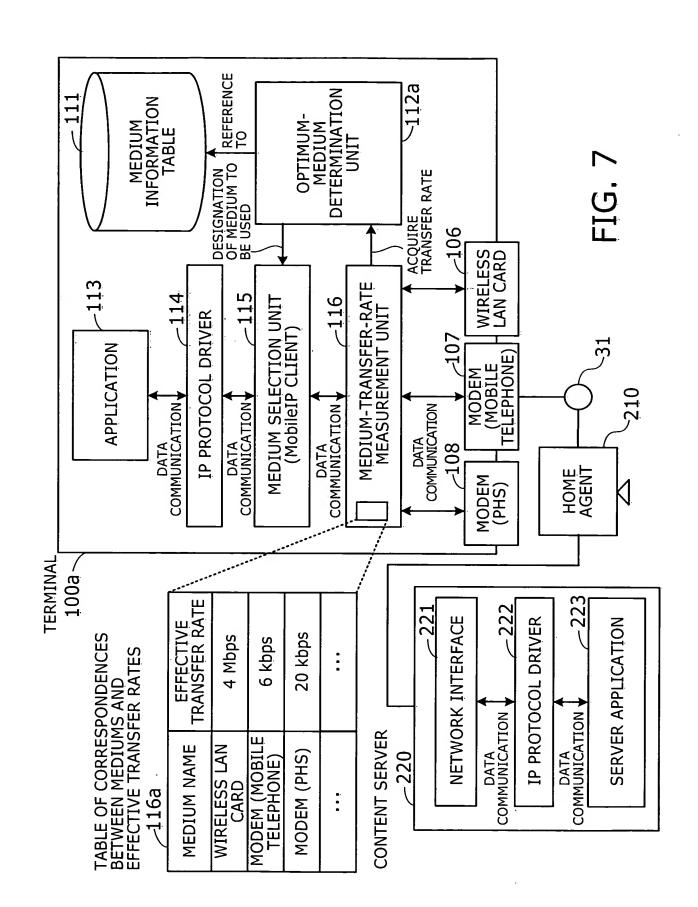


FIG. 5

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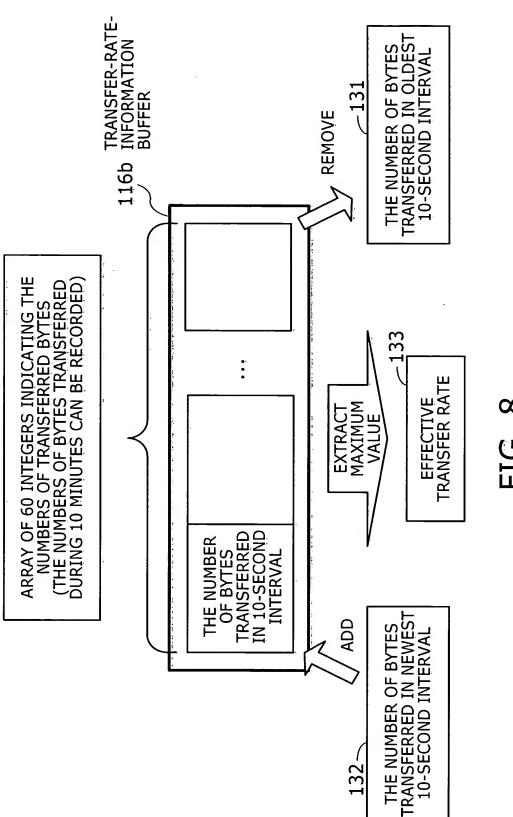
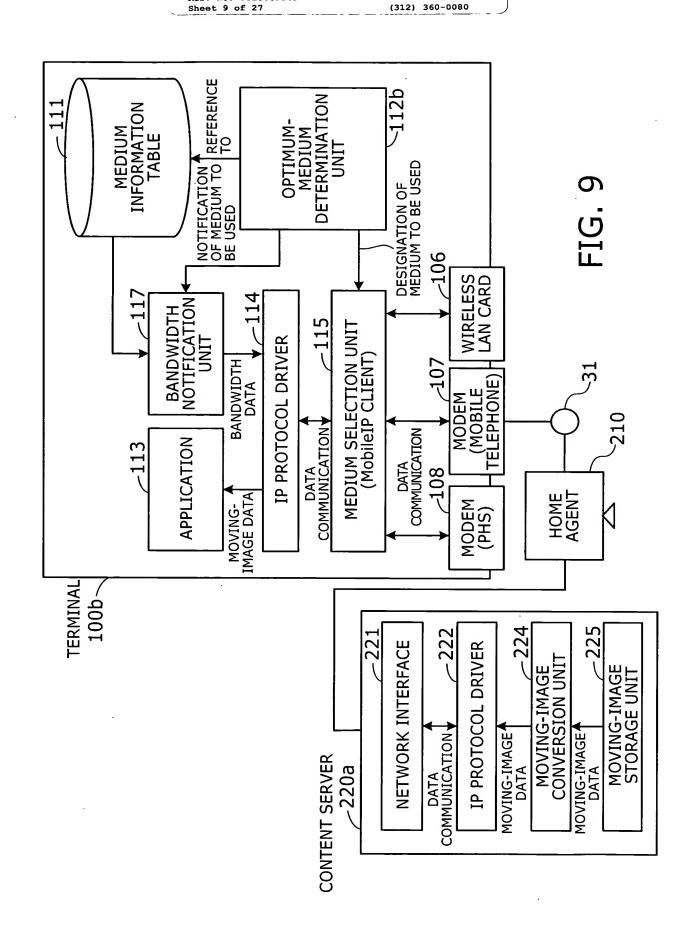


FIG. 8

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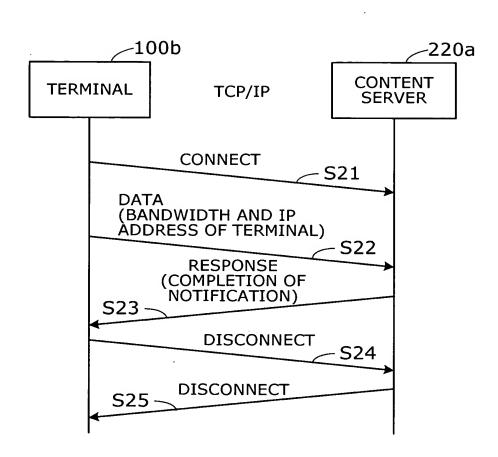


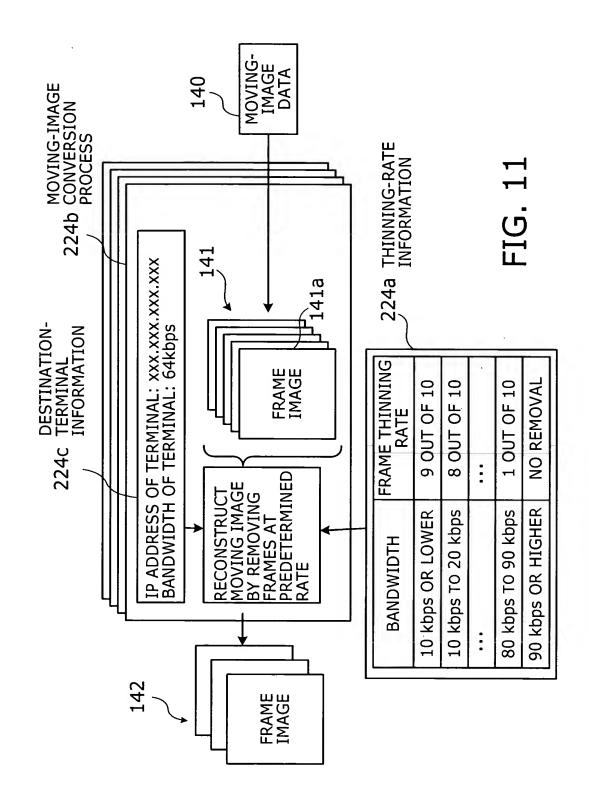
FIG. 10

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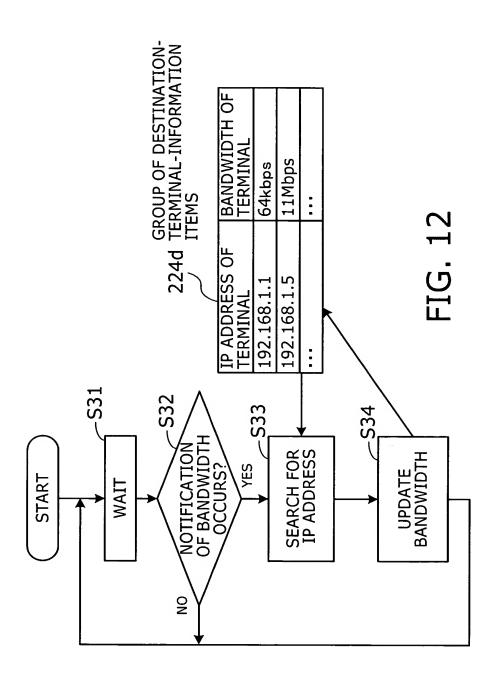
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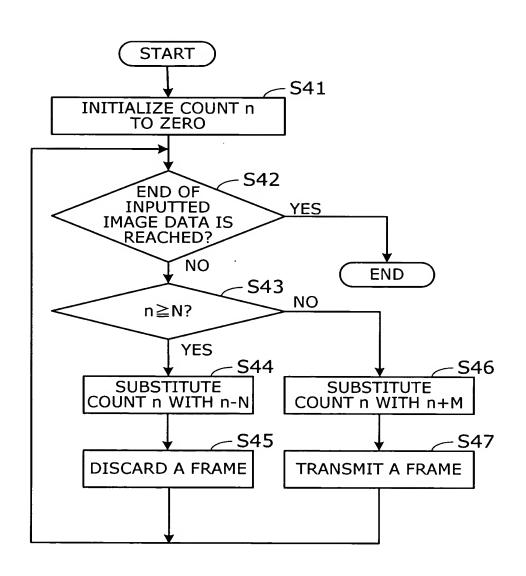


FIG. 13

(312) 360-0080 Sheet 14 of 27 112b REFERENCE TO **DETERMINATION** 111 INFORMATION TABLE OPTIMUM-DESIGNATION OF MEDIUM TO BE USED MEDIUM MEDIUM UNIT NOTIFICATION OF MEDIUM TO NOTIFICATION OF TRANSFER RATE 7106 WIRELESS LAN CARD -117a NOTIFICATION UNIT **BANDWIDTH** MEDIUM-TRANSFER-RATE MEASUREMENT UNIT -115 -118MEDIUM SELECTION UNIT (MobileIP CLIENT) IP PROTOCOL DRIVER BANDWIDTH DATA ★ 107 (MOBILE TELEPHONE) MODEM DATA COMMUNICATION▼ COMMUNICATION DATA COMMUNICATION **APPLICATION** 7108 MOVING- ► IMAGE DATA HOME AGENT MODEM (PHS) CONTENT TERMINAL 220a 100c EFFECTIVE TRANSFER RATE 4 Mbps 20 kbps TABLE OF CORRESPONDENCES BETWEEN MEDIUMS AND EFFECTIVE TRANSFER RATES 6 kbps 224 222 221 NETWORK INTERFACE IP PROTOCOL DRIVER CONVERSION UNIT MOVING-IMAGE STORAGE UNIT **MOVING-IMAGE** MODEM (MOBILE TELEPHONE) DATA COMMUNICATION ♣ MEDIUM NAME MOVING-IMAGE DATA WIRELESS LAN CARD MOVING-IMAGE MODEM (PHS) DATA -118a :

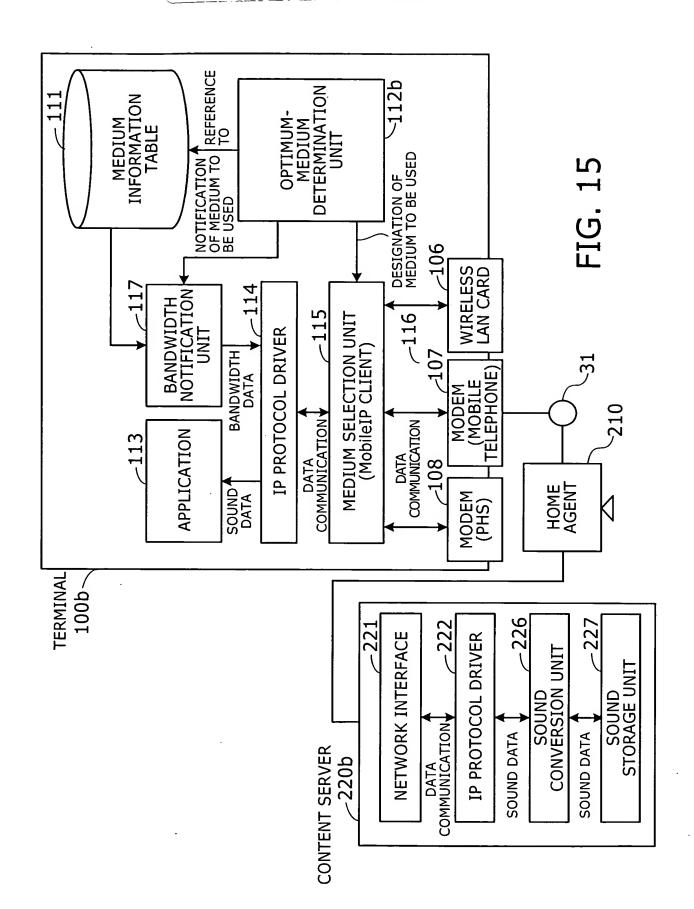
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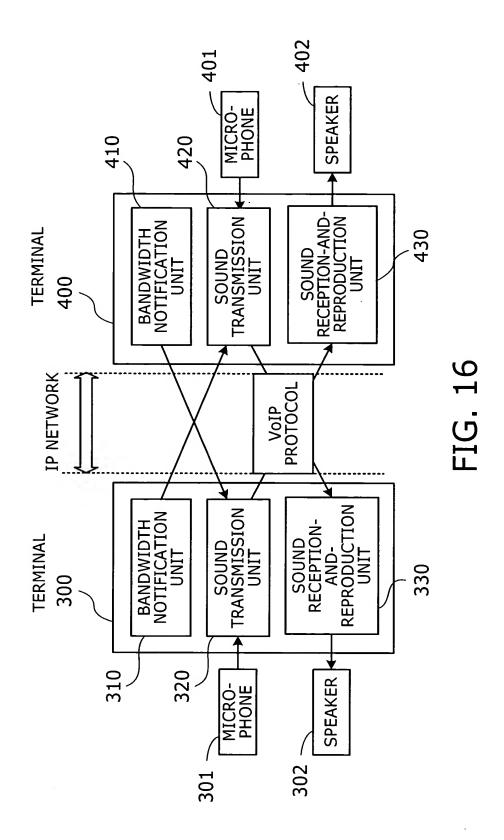
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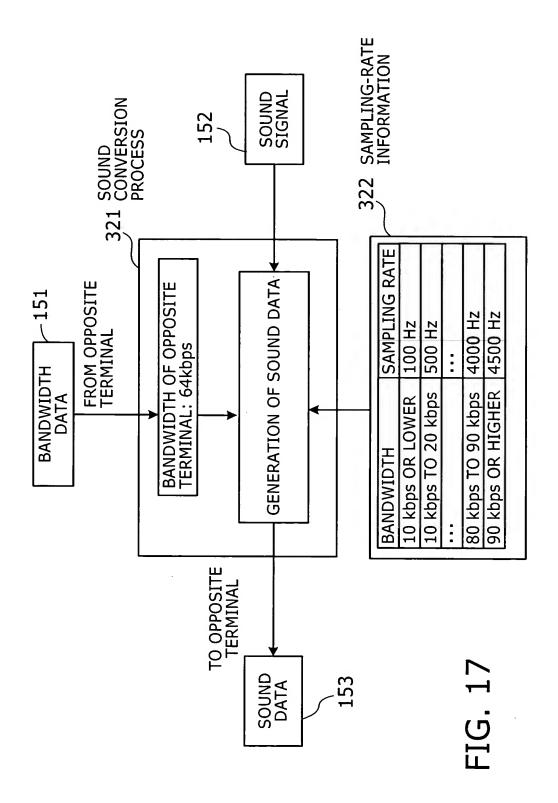
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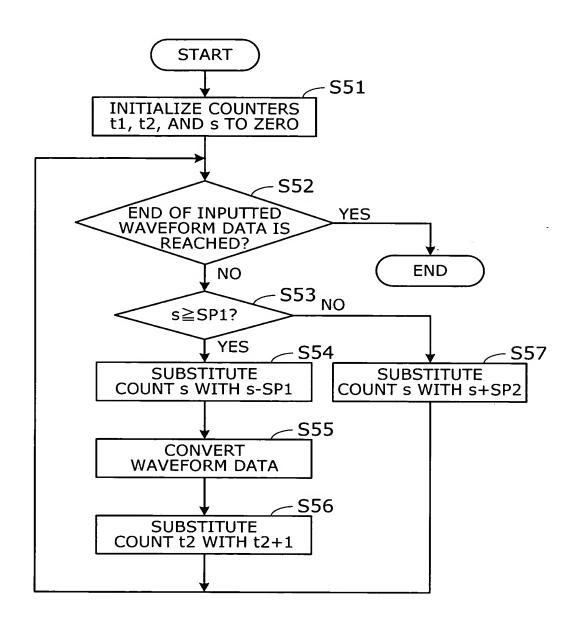


FIG. 18

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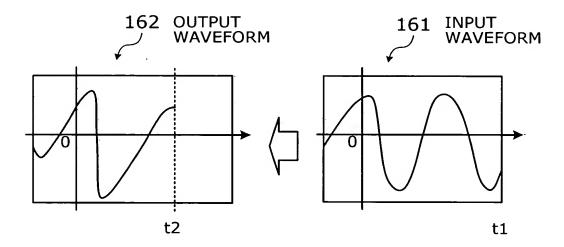


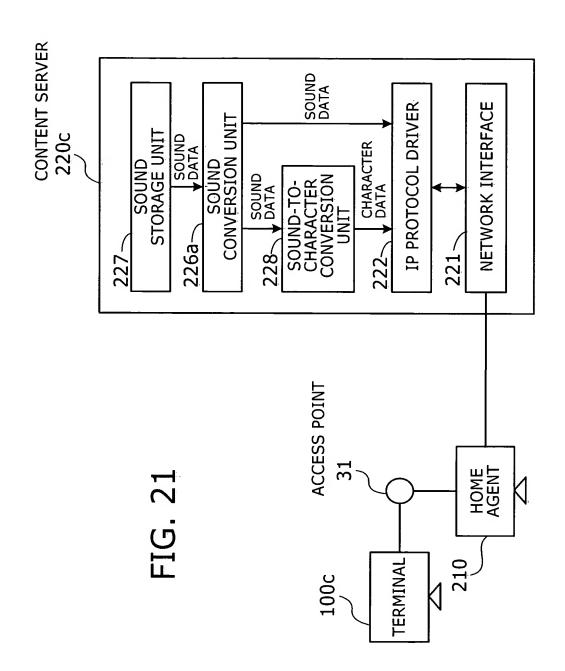
FIG.19

Takeshi Saito et al. GREER, BURNS & CRAIN, (Patrick G. Ref. No. 0828.69843 Sheet 20 of 27 (312) 360-0080 REFERENCE TO DETERMINATION INFORMATION TABLE OPTIMUM-MEDIUM DESIGNATION OF $^{\prime}$ I MEDIUM UNIT NOTIFICATION OF MEDIUM TO FIG. 20 ACOUISITION OF TRANSFER RATE 7106 WIRELESS LAN CARD -117a 114 NOTIFICATION UNIT BANDWIDTH MEDIUM-TRANSFER-RATE MEASUREMENT UNIT -115 7118 MEDIUM SELECTION UNIT (MobileIP CLIENT) IP PROTOCOL DRIVER 107 BANDWIDTH DATA (MOBILE TELEPHONE) MODEM DATA COMMUNICATION DATA COMMUNICATION DATA COMMUNICATION **APPLICATION** 108 HOME AGENT SOUND O MODEM (PHS) CONTENT **TERMINAL** 220b 100c EFFECTIVE TRANSFER RATE TABLE OF CORRESPONDENCES BETWEEN MEDIUMS AND 6 kbps 20 kbps 4 Mbps 226 EFFECTIVE TRANSFER RATES 222 : **NETWORK INTERFACE** IP PROTOCOL DRIVER SOUND CONVERSION UNIT STORAGE UNIT SOUND MODEM (MOBILE TELEPHONE) COMMUNICATION MEDIUM NAME WIRELESS LAN CARD MODEM (PHS) SOUND DATA SOUND DATA -118a :

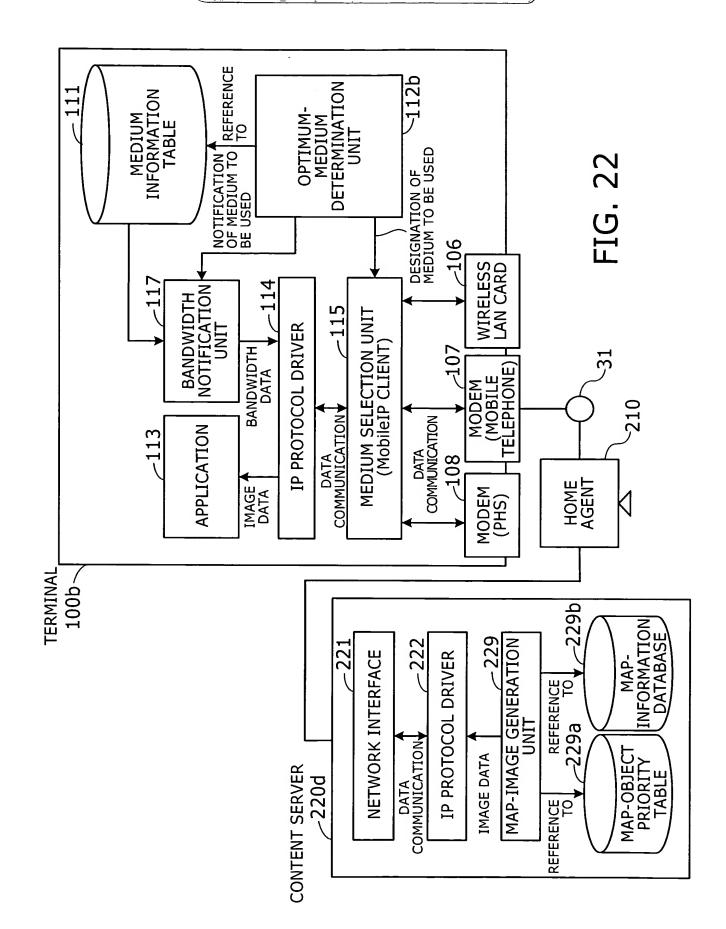
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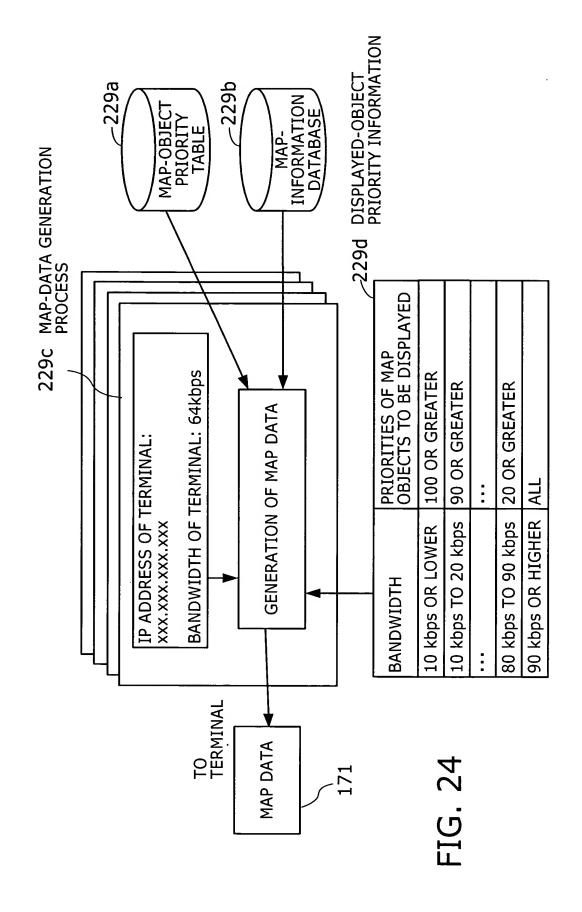
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229a MAP-OBJECT PRIORITY TABLE

ОВЈЕСТ	PRIORITY
PLACE NAME	121
BUILDING	110
RIVER	20
	• • • • •

FIG. 23

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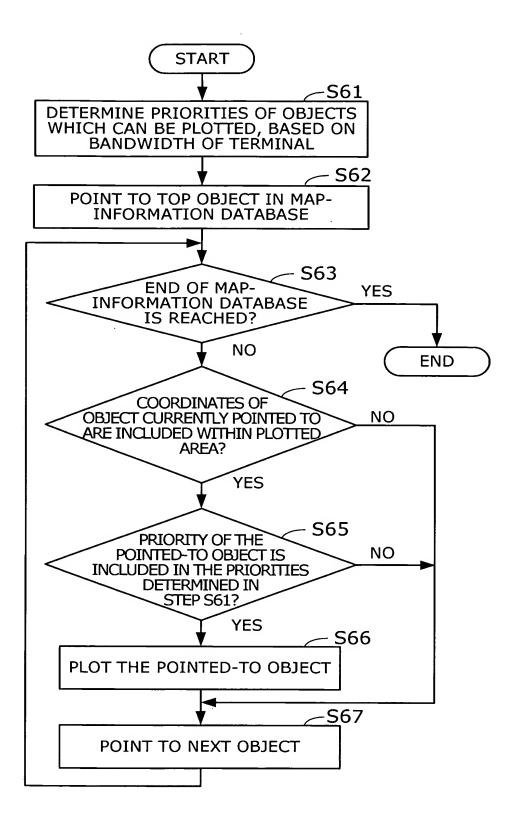


FIG. 25

Ref. No. 0828.69843 Sheet 26 of 27 (312) 360-0080 REFERENCE TO DESIGNATION OF 112b MEDIUM TO BE USED DETERMINATION UNIT INFORMATION MEDIUM OPTIMUM MEDIUM TABLE NOTIFICATION OF MEDIUM TO BE USED FIG. 26 NOTIFICATION OF TRANSFER RATE 7106 WIRELESS LAN CARD -117a 114 BANDWIDTH NOTIFICATION MEDIUM-TRANSFER-RATE MEASUREMENT UNIT -118MEDIUM SELECTION UNIT (MobileIP CLIENT) IP PROTOCOL DRIVER LINO BANDWIDTH DATA 107 (MOBILE TELEPHONE) MODEM DATA COMMUNICATION DATA COMMUNICATION DATA COMMUNICATION APPLICATION 7108 MAP DATA HOME AGENT MODEM (PHS) CONTENT SERVER **TERMINAL** 100c~ -220d -229b EFFECTIVE TRANSFER RATE INFORMATION DATABASE -222 TABLE OF CORRESPONDENCES BETWEEN MEDIUMS AND EFFECTIVE TRANSFER RATES 6 kbps 20 kbps MAP-IMAGE GENERATION 4 Mbps 221 IP PROTOCOL DRIVER **NETWORK INTERFACE** MAP-REFERENCE TO -229a DATA COMMUNICATION MODEM (MOBILE TELEPHONE) MAP-OBJECT PRIORITY TABLE MEDIUM NAME WIRELESS LAN CARD MODEM (PHS) MAP DATA -118a REFERENCE TO

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(Patrick G. Burns)

March 2, 2004 COMMUNICATION CONTROL PROGRAM... Takeshi Saito et al. (Patrick G. Burns) GREER, BURNS & CRAIN, Ref. No. 0828.69843 Sheet 27 of 27 (312) 360-0080 CAMERA 999 621 -620 HIGH-BANDWIDTH ENCODER -610BANDWIDTH ENCODER DELIVERY SERVER LOW-630 **HOME AGENT** -700 RAS SERVER 7-650 -640 WIRELESS LAN ACCESS POINT FIG. 27 MODEM (MOBILE TELEPHONE) WIRELESS LAN CARD SEAMLESS ROAMING UNIT 502~ 501 MOVING-IMAGE DATA INQUIRY ABOUT
BANDWIDTH
(POLLING) WEB BROWSER 530 **PLAYER**

NOTIFICA -TION OF/ URL

APPLICATION

520

WEB SERVER

500 TERMINAL

-540

510

MANIPULATION INPUT

ACTIVA-